

LARS PAULSEN, EIT

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EDUCATION

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| University of California, San Diego M.S. Mechanical Engineering | <i>Sept 2024 - Present</i> Specializations: Adaptive Systems, Control |
| University of California, Irvine B.S. Mechanical Engineering | <i>Sept 2019 - June 2023</i> Specialization: Mechanical System Design |

WORK EXPERIENCE

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| Research Engineer Magnetic Microsystems & Microrobotics Lab <ul style="list-style-type: none">Directed research team developing a novel device for magnetizing metal particles | <i>Oct 2023 - Oct 2024</i> UC Irvine |
| Southern California Robotics Symposium Coordinator Magnetic Microsystems & Microrobotics Lab <ul style="list-style-type: none">Coordinated guest list, organized poster sessions, assisted guest speakers, and guided workshops | <i>June 2023 - Sept 2023</i> UC Irvine |

PROJECTS

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| ACE-F: A Cross Embodiment Foldable System <ul style="list-style-type: none">Modeled novel teleoperation device in SolidworksCreated sensorless force feedback control system in Python and C++Designed Mujoco simulation environment using PythonTrained imitation learning models in simulation and on real Panda and U-Factory robots | <i>Jan 2025 - Nov 2025</i> UC San Diego [Website Link] |
| 2D Magnetization Head <ul style="list-style-type: none">Designed novel device for imprinting magnetic poles in particles suspended in 3D printed matrixSimulated magnetic fields and transient response in COMSOLModeled 15+ structural and electrical components in SolidworksPreparing submission to IEEE Transactions on MechatronicsSent GD&T compliant engineering drawings to outside manufacturers for custom parts | <i>Oct 2023 - Present</i> UC Irvine |
| Humanoid Policy ~ Human Policy <ul style="list-style-type: none">Designed and fabricated a 3 DOF camera gimbal for replacing an H1 robot headCollected human and humanoid training data for imitation learning models | <i>Oct 2023 - Present</i> UC Irvine |

PUBLICATIONS

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- [1] Rui Yan*, Jiajian Fu*, Shiqi Yang*, **Lars Paulsen***, Xuxin Cheng, Xiaolong Wang
ACE-F: A Cross Embodiment Foldable System with Force Feedback for Dexterous Teleoperation
Under review, 2025
- [2] Ri-Zhao Qiu*, Shiqi Yang*, Xuxin Cheng*, Chaitanya Chawla*, Jialong Li, Tairan He, Ge Yan, David J. Yoon, Ryan Hoque, **Lars Paulsen**, Ge Yang, Jian Zhang, Sha Yi, Guanya Shi, Xiaolong Wang
Humanoid Policy ~ Human Policy
arXiv preprint arXiv:2503.13441, 2025

TECHNICAL SKILLS

Solidworks (CSWA), GD&T, FEA (COMSOL, Patran), Python, C++, Matlab, PLC, Physics Simulators (Mujoco, Pybullet, CoppeliaSim), Allen Bradley PLC, 3D Printing, Low-voltage electronics, GitHub, Microsoft Office, Adobe, Autodesk Eagle

CERTIFICATIONS

Engineer-In-Training No. 180495, California, November 2023